



MARSHALL STAR

Serving the Marshall Space Flight Center Community

Jan. 8, 2004

'We're back!'

Spirit lands on Mars

JPL news release

A traveling robotic geologist from NASA landed on Mars Saturday and returned stunning images of the area around the landing site in Gusev Crater.

Mars Exploration Rover Spirit successfully sent a radio signal after the spacecraft had bounced and rolled for several minutes following its initial impact at 10:35 p.m. CST.

"This is a big night for NASA," said NASA Administrator Sean O'Keefe. "We're back. I am very, very proud of this team, and we're on Mars."

Members of the mission's flight team at NASA's Jet Propulsion Laboratory in Pasadena, Calif., cheered and clapped when they learned that NASA's Deep Space Network had received a post-landing signal from Spirit. The cheering resumed about three hours later when

Space Shuttle Columbia crew memorialized on Mars

Headquarters release

NASA Administrator Sean O'Keefe announced plans Tuesday to name the landing site of the Mars Spirit Rover in honor of the astronauts who died in the tragic accident of the Space Shuttle Columbia last year.

The area in the vast flatland of the Gusev Crater where Spirit landed Saturday will be called the Columbia Memorial Station.

Since its historic landing, Spirit has

See Columbia on page 2



Photo by Bill Ingalls, NASA

NASA Administrator Sean O'Keefe, center, embraces Jet Propulsion Laboratory Director Dr. Charles Elachi while looking at the first images arriving from Mars after the exploration rover Spirit landed Saturday.

the rover transmitted its first images to Earth, relaying them through NASA's Mars Odyssey orbiter.

"We've got many steps to go before this mission is over, but

See Spirit on page 2

Light emitting diodes bring relief to young cancer patients

NASA technology used for plant growth in clinical trials

by Jack Robertson

A nurse holds a strange-looking device, moving it slowly toward a young patient's face.

The note-card-sized device is covered with glowing red lights, but as it comes closer, the youngster shows no fear. He's hopeful this painless procedure using an array of lights will help ease or prevent some of the pain and discomfort associated with cancer treatment.

The youngster is participating in the second phase of human clinical trials for

this light-healing device. The first round of tests by Medical College of Wisconsin researchers at Children's Hospital of Wisconsin in Milwaukee, was so encouraging that doctors have expanded the trials to several U.S. and foreign hospitals.

"We've already seen how using LEDs can improve a bone marrow transplant patient's quality of life," said Dr. Harry Whelan, professor of neurology, pediatrics and hyperbaric medicine at the Wisconsin medical college. "These trials will

See LEDs on page 5

Spirit

Continued from page 1

we've retired a lot of risk with this landing," said JPL's Pete Theisinger, project manager for the Mars Exploration Rover Project.

Richard Cook, deputy project manager for the rovers, said, "We're certainly looking forward to Opportunity landing three weeks from now."

Opportunity is Spirit's twin rover, headed for the opposite side of Mars.

Dr. Charles Elachi, JPL's director, said, "To achieve this mission, we have assembled the best team of young women and men this country can put together. Essential work was done by other NASA centers and by our industrial and academic partners."

NASA chose Spirit's landing site, within Gusev Crater, based on evidence from Mars orbiters that this crater may have held a lake long ago. A long, deep valley, apparently carved by ancient flows of water, leads into Gusev. The crater itself is a basin the size of Connecticut created by an asteroid or comet impact early

in Mars' history. Spirit's task is to spend the next three months exploring for clues in rocks and soil about whether the past environment at this part of Mars was ever watery and suitable to sustain life.

Spirit traveled 302.6 million miles to reach Mars after its launch from Cape Canaveral Air Force Station, Fla., on June 10, 2003. Its twin, Mars Exploration Rover Opportunity, was launched July 7, 2003, and is on course for a landing on the opposite side of Mars on Jan. 25.

The flight team expects to spend more than a week directing Spirit through a series of steps in unfolding, standing up and other preparations necessary before the rover rolls off of its lander platform to get its wheels onto the ground. Meanwhile, Spirit's cameras and a mineral-identifying infrared instrument began examining the surrounding terrain. That information will help engineers and scientists decide which direction to send the rover first.

Additional information about the Mars Exploration Rover project is available at <http://marsrovers.jpl.nasa.gov> and <http://athena.cornell.edu>.

Columbia

Continued from page 1

been sending extraordinary images of its new surroundings on the red planet over the past few days. Among them, an image of a memorial plaque placed on the spacecraft to Columbia's astronauts and the STS-107 mission.

The plaque is mounted on the back of Spirit's high-gain antenna, a disc-shaped tool used for communicating directly with Earth. The plaque is aluminum and approximately six inches in diameter. The

memorial plaque was attached March 28, 2003, at the Payload Hazardous Servicing Facility at NASA's Kennedy Space Center in Florida. Chris Voorhees and Peter Illsley, Mars Exploration Rover engineers at NASA's Jet Propulsion Laboratory in Pasadena, Calif., designed the plaque.

"During this time of great joy for NASA, the Mars Exploration Rover team and the entire NASA family paused to remember our lost colleagues from the

Columbia mission. To venture into space, into the unknown, is a calling heard by the bravest, most dedicated individuals," said NASA Administrator Sean O'Keefe. "As team members gazed at Mars through Spirit's eyes, the Columbia memorial appeared in images returned to Earth, a fitting tribute to their own spirit and dedication. Spirit carries the dream of exploration the brave astronauts of Columbia held in their hearts."

The successful landing of Spirit

A message from the NASA Administrator

A Triumphant Landing on Mars." That was the front-page headline of the Washington Post. What a great way to start out the New Year and the second century of flight!

The soft landing of Spirit, following its dramatic six-minute descent through the Martian atmosphere, marks the fourth time that a spacecraft from Earth has successfully landed on our neighboring planet. They've all come from NASA. Congratulations to all members of the NASA family on this historic achievement.

It is worth noting that in planning for this mission, our Mars Exploration Team worked hard to learn from our past

exploration successes and setbacks, as Mars is a very tough customer when it comes to unveiling its secrets.

We will continue to release images taken from the Martian surface by Spirit, as the Rover gears up for its ambitious scientific mission. We're also excited that Opportunity is less than three weeks away from its landing on the other side of the planet.

Again, I thank everyone involved for your dedication to these incredible missions. This is a great victory for science and for the spirit of exploration and discovery.

— Sean O'Keefe
NASA Administrator

NASA names Space Shuttle External Tank Project manager, deputy project manager and chief engineer

by Lynnette Madison

NASA has named Sandra C. Coleman as the manager of the Space Shuttle External Tank Project Office at the Marshall Center. Also in the External Tank Office, James L. Reuter has been named the deputy manager and Neil Otte, previously the deputy manager, has been named chief engineer.

Coleman and Reuter will be responsible for design, development, certification, testing and manufacturing of the External Tank. Otte will be responsible for assuring development and design efforts on the tank are planned and conducted on a sound engineering basis.

"The expertise and experience of these individuals continues to strengthen the overall Program as it moves closer to returning Space Shuttles to safe flight," said Bill Parsons, manager of the Space Shuttle Program.

The new managers will lead the work of more than 1,000 government and contractor employees involved in design and production of the External Tank, including those who build the tank at Lockheed Martin's Michoud Assembly Facility near New Orleans.

"It is imperative that we have strong leadership as we work to return the Space Shuttle safely to flight," said Mike Rudolphi, manager of the Space Shuttle Propulsion Office at the Marshall Center. "These three people have the commitment, the experience and the leadership skills necessary to be successful."

The External Tank is one of the four propulsion elements that boost the Space Shuttle into orbit during the first eight-and-a-half minutes of flight. The manufacturing, development and flight readiness of those four elements - the External Tank, Solid Rocket Boosters, Reusable Solid Rocket Motors and Main Engines - are the responsibility of the Marshall Center's Space Shuttle Propulsion Office.

Coleman has served as deputy manager of the Space Shuttle Propulsion Office since November 2002 and as interim manager twice during the past year. She previously worked in Marshall's Science Directorate, where she was the chief operating officer of the National Space Science and Technology Center during its critical start-up period. The center unites government, industry and academia to further science and engineering research.

Coleman joined NASA in 1965, working in Marshall's Saturn program office and supporting the effort that launched Americans to the Moon. In 1969, she became a member of the Space Shuttle Task Team. From 1972 to 1997, Coleman served in three of the four Shuttle propulsion project offices, including integration subsystem manager in the Solid Rocket Booster Project, and



Coleman

the business, assistant and deputy manager positions in the Reusable Solid Rocket Motor Project. During that time, she also accepted a one-year special assignment in NASA Headquarters.

Coleman earned a master's degree in industrial engineering from the University of Alabama in Tuscaloosa and a bachelor's degree in accounting from the University of Alabama in Huntsville. She has completed numerous training classes including a recent Senior Managers in Government class at Harvard University.

Coleman has received numerous awards, including NASA's Outstanding Leadership Medal, Exceptional Service Medal and the Silver Snoopy Award, recognition given by NASA's astronaut corps to a select few individuals who have contributed to the success of human space flight missions.

Jim Reuter joined the External Tank Project Office in July 2003 as the lead engineer for systems integration, playing a key role in developing the strategy to certify the tank for its return to flight. Prior to assuming that position, he accepted a yearlong assignment at NASA Headquarters in Washington, handling the day-to-day role of associate director for the Space Transportation Technology Division.



Reuter

In 1994, he was chosen as system manager for the International Space Station's Environmental Control and Life Support System, being developed at Johnson Space Center in Houston. In 2000, Reuter was selected to lead the Marshall Center's efforts to bring the Space Station's Node 3 environmental control and life support system equipment from development to flight hardware status, readying it to fly.

Reuter is a graduate of the University of Minnesota in Minneapolis with a bachelor's degree in mechanical engineering, and has attended the University of Alabama in Huntsville. The author of 12 technical aerospace papers, he has received numerous NASA honors and awards, including an Exceptional Service Medal and a Silver Snoopy Award.

Neil Otte joined the External Tank Project Office in September



Otte

See NASA on page 4

David Martin named NASA Solid Rocket Booster Project manager; Thomas Williams new deputy manager

by Lynnette Madison

David M. Martin has been named manager of the Solid Rocket Booster Project in NASA's Space Shuttle Propulsion Office at the Marshall Center. Thomas J. Williams was named deputy manager.

Martin had been the Solid Rocket Booster deputy project manager; he succeeds Parker Counts, who retired. In assuming this new position, Martin also has been designated to the federal government's Senior Executive Service — the personnel system that covers most of the top managerial, supervisory and policy positions in the executive branch.

A native of Huntsville, Martin began his NASA career in 1981 as a cooperative education student working on rotational assignments between the Marshall Center and NASA's Kennedy Space Center in Florida.

Martin attended Auburn University in Auburn, and earned his bachelor's degree in electrical engineering from the University of Alabama in Huntsville in 1983. He then joined Marshall full-time as an electronics hardware design engineer in the Science and Engineering Directorate. He later served as a Microgravity Experiment Chief Engineer under Marshall's Associate Director for Space. In 1987 he joined the External Tank Project.

In 1988, Martin moved to the Solid Rocket Booster Project, working in several positions at the Marshall and Kennedy centers. He was named deputy project manager in 1999.

Martin has received NASA's Space Flight Awareness Honoree Award — the highest form of recognition bestowed upon an employee by the NASA Space Flight Awareness Program — the Silver Snoopy Award (the highest honor from NASA astronauts) and a Marshall Center Director's Commendation.



Photos, Marshall Imaging Services

Martin

and a Marshall Center Director's Commendation.

Williams began his NASA career in 1983 at the Marshall Center as a co-op student working as a nozzle systems engineer for the Structures and Propulsion Laboratory.

In 1989, Williams joined the chief engineer's office in the Reusable Solid Rocket Motor Project Office as the test manager. During his tenure as test manager he oversaw development and qualification tests on the motor, including the first three large-scale motor firings conducted at the Marshall Center.

In 1994, Williams was named nozzle subsystem manager for the motor project and, in 2000, he was chosen as the design team lead responsible for the technical design of the reusable motor.

Williams was selected for a temporary assignment at NASA's Johnson Space

Center in Houston in June 2002. There he served as technical assistant to the Space Shuttle program manager, coordinating activities from NASA centers that work with human space flight. In January 2003, Williams returned to Marshall and was chosen to serve as technical assistant to the deputy manager of the Space Shuttle Propulsion Office.

Williams, a native of Huntsville, earned his bachelor's degree in mechanical engineering from Auburn University in 1987. He has received numerous awards, including a Marshall Center Director's Commendation, and was selected as a NASA Space Flight Awareness Honoree.

NASA's Space Shuttle Propulsion



Williams

Office is responsible for design, development, flight readiness and performance of propulsion systems for the Space Shuttle, including the Shuttle's Solid Rocket Boosters.

The Solid Rocket Boosters, along with the Reusable Solid Rocket Motors, help lift each Space Shuttle vehicle into orbit. The boosters provide more than 80 percent of the Shuttle's thrust during the first two minutes of ascent.

The writer, an employee of ASRI, supports the Media Relations Department.

NASA

Continued from page 3

1999, leading an engineering team responsible for strategic planning. He has served as chief engineer, and for the past year, as deputy manager for the project office.

Otte began his NASA career at the Marshall Center in 1987 as an aerospace engineer in the Structures and Dynamics Laboratory, Stress Analysis Branch. He worked on such projects as the National Launch System, the Heavy Lift Launch System, and served as the structures lead during the development of the Super Lightweight External Tank.

Otte is a graduate of Iowa State University in Ames, with a bachelor's degree in mechanical engineering. He earned his master's degree in mechanical engineering at Auburn University in Auburn.

During his NASA career, Otte has received many honors, including being chosen as Space Flight Awareness honoree and recipient of the Agency's Exceptional Achievement Medal. He also has been recognized for redesign work on the Solid Rocket Booster and the design and certification of the Super Lightweight External Tank.

LEDs

Continued from page 1

hopefully help us take the next steps to provide this as a standard of care for this ailment.”

The light is produced by light emitting diodes, or LEDs. They are used in

Biologists have found that cells exposed to near-infrared light — energy just outside the visible range — from LEDs grow 150 to 200 percent faster than those cells not stimulated by such light.

hundreds of applications, from electronic clock displays to jumbo TV screens.

Light for plants

These LEDs provide light for plants grown on the Space Station as part of commercial experiments sponsored by industry under the Space Product Development Program at the Marshall Center. Researchers discovered that the diodes also had many promising medical applications, prompting this research to be funded by a NASA Small Business Innovation Research contract through the Technology Transfer Department at the Marshall Center.

Biologists have found that cells exposed to near-infrared light — energy just outside the visible range — from LEDs grow 150 to 200 percent faster than those cells not stimulated by such light. The light arrays increase energy inside cells that speed up the healing process.

Pain relief

In the first stage of the study, use of the LEDs resulted in significant relief to pediatric bone marrow transplant patients suffering the ravages of oral mucositis, a common side effect of chemotherapy and radiation treatments according to Dr. David Margolis, associate professor of pediatrics at the Medical College. He works with Dr. Whelan on the study at Children's Hospital of Wisconsin, a major teaching affiliate of the Medical College.

Many times young bone marrow transplant recipients contract this condi-

tion that produces ulcerations in the mouth and throat, severe pain, and in some cases, inflammation of the entire gastro-intestinal tract. Swelling and bleeding occur, and chewing and swallowing become difficult, if not impossible — affecting a child's

overall health because of reduced drinking and eating.

“Our first study was very encour-

aging, and using the LED device greatly reduced or prevented the mucositis problem, which is so painful and devastating to these children,” Whelan said. “But we still need to learn more.”

More clinical trials

“We're conducting further clinical trials with larger groups and expanded control groups, as required by the U.S. Food and Drug Administration, before the device can be approved and available for widespread use,” Whelan said.

The clinical trials are expected to take approximately three years with a total of 80 patients.

Participants currently include the Medical College of Wisconsin in Milwaukee; Roswell Park Cancer

Institute in Buffalo, N.Y. and Instituto de Oncologia Pediatrica, in Sao Paulo, Brazil.

Rush-Presbyterian-St. Luke's Medical Center in Chicago; University of Illinois Medical Center in Chicago; Hospital Sirio Libanes in Sao Paulo Brazil; and Hadassah University Medical Center in Jerusalem, Israel have also asked to join the multi-center study.

In the first clinical study, the team examined each patient's mouth, tongue and throat. They asked the patient to rate the current level of pain before treatment.

Each patient received one minute of LED therapy starting the day of the bone marrow transplant and a one-minute treatment each day thereafter for a two-week period.

The treatment device was a 3-by-5-inch portable, flat array of light emitting diodes. It was held on the outside of a patient's left cheek for just over a minute each day. The process was repeated over the patient's right cheek, but with foil placed between the LED array and the patient to provide a sham treatment for comparison. There wasn't any treatment of the throat area, which provided the control for the first study.

Patients respond to treatment

The researchers compared the percentage of patients with ulcerative oral mucositis to historical epidemiological controls. Just 53 percent of the treated patients in the bone marrow transplant group developed mucositis, considerably less than the usual rate of 70-90 percent. Patients also reported pain reduction in their mouths when compared to untreated pain seven days following bone marrow transplant.

“Our first study was very encouraging, and using the LED device greatly reduced or prevented the mucositis problem, which is so painful and devastating to these children.”

— **Dr. Harry Whelan, professor of neurology, pediatrics and hyperbaric medicine at the Medical College of Wisconsin in Milwaukee**

Quantum Devices of Barneveld, Wis., makes the wound-healing LED device. The company specializes in the manufacture of silicon photodiodes - semiconductor devices used for light detection — and light emitting diodes for commercial, industrial and medical applications.

The writer, an employee of ASRI, supports the Media Relations Department.

Healthy rover shows its new neighborhood on Mars

from combined releases

NASA's Spirit Rover is still examining its new surroundings, revealing a vast flatland well suited to the robot's unprecedented mobility and scientific tool kit.

"Spirit has told us that it is healthy," said Jennifer Trospen of NASA's Jet Propulsion Laboratory in Pasadena, Calif. Trospen is Spirit mission manager for operations on Mars' surface. The rover remains perched on its lander platform, and the next nine days or more will be spent preparing for egress, or rolling off, onto the Martian surface.

With only two degrees of tilt, with the deck toward the front an average of only about 15 inches off the ground, and with apparently no large rocks blocking the way, the lander is in good position for egress.

"The egress path we're working toward is straight ahead," Trospen said.

The rover's initial images excited scientists about the prospects of exploring the region after the roll-off.

"My hat is off to the navigation team because they did a fantastic job of getting us right where we wanted to be," said Dr. Steve Squyres of Cornell University, Ithaca, N.Y., principal investigator for the science payload.



Photo by Bill Ingalls, NASA

Rob Manning, who heads the Mars Exploration Rover Project Entry, Descent and Landing team, holds the same type of UHF antenna that is on the Spirit rover, which he can see in the stereo images sent from Mars on his monitor screens.

By correlating images taken by Spirit with earlier images from spacecraft orbiting Mars, the mission team has determined that the rover appears to be in a region marked with numerous swaths where dust devils have removed brighter dust and left darker gravel behind.

"This is our new neighborhood," Squyres said. "We hit the sweet spot. We wanted someplace where the wind had cleared off the rocks for us. We've landed in a place that's so thick with dust devil tracks that a lot of the dust has been blown away."

The terrain looks different from any of the sites examined by NASA's three previous successful landers — the two Vikings in 1976 and Mars Pathfinder in 1997.

"What we're seeing is a section of surface that is remarkably devoid of big boulders, at least in our immediate vicinity, and that's good news because big boulders are something we would have trouble driving over," Squyres said. "We see a rock population that is different from anything we've seen elsewhere on Mars, and it comes out very much in our favor."

The rover is near several shallow bowls, which may be impact craters. One of these, dubbed "Sleepy Hollow" by mission scientists, is about 30 feet across and about 40 feet north of the lander. When Spirit drives off its lander platform in a week or so, this particular depression may be one of its first destinations.

"It's a window into the interior of Mars," Squyres said.

One of the steps in preparing Spirit for rolling onto the soil is to extend the front wheels, which were tucked inside a tight space during the flight from Earth.

"We're like kids in a candy store," said Art Thompson, rover tactical activity lead. "We can hardly wait until we get off the lander and start doing fun stuff on the surface."



Photo by Doug Stoffer, NASA/Marshall Center

King gets 'game' ball from Alabama A&M University

Marshall Director David King, left, accepts a football from Alabama A&M University Athletic Director Jim Martin as a memento of Marshall's participation in Alabama A&M's recent High School Senior Day activities. King spoke about career choices to more than 6,000 high school seniors visiting the A&M campus in Huntsville.

Announcements

National Space Club Leadership Luncheon set Jan. 28

The National Space Club will host its annual Leadership Luncheon at noon Jan. 28 in the North Hall of the Von Braun Center in Huntsville. Speakers will include Marshall Center Director David King. Tickets cost \$25 per person. Checks should be made payable to The National Space Club and be received by Jan. 16 in Marshall's Government and Community Relations Department. For more information, call Rosa Kilpatrick at 544-0042.

Retirement reception for Alex McCool will be Jan. 16

A retirement reception honoring Alex McCool for more than 55 years of NASA and government service will be at 2:30 p.m. Jan. 16 in the Center Activities Bldg. 4316. Tickets cost \$8 per person if purchased by close-of-business Jan. 12 and \$9 thereafter and at the door. Tickets are available from administrative officers or by calling Judy Green at 544-8704.

Tactical Interceptor Design Symposium set for Jan. 16

A Tactical Interceptor Design Symposium will be from 8 a.m.-4:30 p.m. Jan. 16 in the Tom Bevell Center at the University of Alabama in Huntsville. The event is sponsored by the university and the American Institute of Aeronautics and Astronautics. For more information go to <http://www.eb.uah.edu/ipt/>.

Employee Preferences Survey due Jan. 14

NASA employees have received information on taking the computer-based Employee Preferences Survey. This is an Agency-wide research initiative to help shape improvements in NASA's recruitment and retention programs. All surveys are completely confidential and will be administered by an outside organization. The survey is not mandatory, but Vicki Novak, NASA assistant administrator for Human Resources, urges all employees to participate by Jan. 14. For more information, see "Inside Marshall."

National Engineers Week Award Banquet is Feb. 26

The annual National Engineers Week Award Banquet will be at 6 p.m. Feb. 26 in the North Hall of the Von Braun Center in Huntsville. Tickets are \$25 per person for advance reservations and \$38 per person for reservations made after Feb. 18. For more information, see "Inside Marshall."

SHE Committee nominations open for chairperson, deputy

The Safety, Health & Environmental Committee is seeking nominations in January and February for chairperson and deputy chairperson. The term of office is one year, beginning in April. Chairperson nominees must be on-site civil servants. Deputy chairperson nominees can be on-site civil servants or contractors. The vote will take place at the Feb. 25 SHE Committee meeting. Nominations should be submitted to Cynthia Behel at 544-2794 or Cynthia.A.Behel@msfc.nasa.gov.

Martin Luther King Jr. Unity Breakfast set for Jan. 19

The 19th Annual Martin Luther King Jr. Unity Breakfast will be at 8 a.m. Jan. 19 in the North Hall of the Von Braun Center in Huntsville. Milton C. Davis, former general president of Alpha Phi Alpha Fraternity Inc. will speak. For ticket information, call Chanel Leslie in the Equal Opportunity Office at 544-3740.

Seats available for SLaTS class, workshop Jan. 12-16

Seats are available for the Space Launch and Transportation Systems class and workshop Jan. 12-16 in Room 723 at the Marshall Institute. Classes are limited to 40 people. Civil servants and contractors are welcome to participate. Deadline for applying to participate is Thursday. For a course description and application details, see "Inside Marshall."

For more Announcements, see "Inside Marshall"

Desktop TV now available at Marshall Center

A pilot version of Desktop TV is now available at the Marshall Center. Depending on computer network connections, either two channels -- NASA TV and Marshall TV -- or four channels -- NASA TV, Marshall TV, CNN and C-Span -- as well as some archived video, can be viewed on computers at the Marshall Center. Since this is a pilot version, service may be intermittent. Any problems related to the service should be reported to Stacey.Haddock@msfc.nasa.gov. Do not call the Help Desk for assistance. To tune in to the service, go to <http://desktoptv.msfc.nasa.gov/>.

NASA, Marshall Center property disposal sales now Internet-based

Live auctions for NASA and Marshall Center property disposal sales now are conducted by Internet only. Go to <http://gsaauctions.gov/gsaauctions/> and search by "State of Alabama" to find items for sale located at Marshall and other federal agencies in the state. For more information or assistance, call 544-1774.

Marshall Association officer election ballots being sent out

E-mail ballots will be sent out to members of the Marshall Association for 2004 officer elections. The following candidates have been nominated for office: president, Robin Henderson and Nelson Parker; vice president for programs, Brian Matisak and Pete Rodriguez; vice president for communications, Beth Cook and Inge Kuberg; and treasurer, James Bailey and Roslin Hicks.

Classes open for Marshall team

Three upcoming classes are open to Marshall team members; Clear Writing on Jan. 12-16, Making Meetings Work on Feb. 9-13, and Effective Briefings on March 8-12. All classes are from 8:30 a.m.-2:30 p.m. in Bldg. 4200, Room G-13C. Call 544-7552 for more information or see "Inside Marshall."

Classified Ads

Miscellaneous

- ★ Lab mix puppies, caramel color, \$150 each. 682-7622
- ★ Jazzy Pride electric chair w/extra batteries, \$900. 881-6086
- ★ La-Z-Boy reclining sofa w/matching rocker recliner and coordinating 5x8 rug, \$400. 426-4995
- ★ Hot tub SPA, Tiger River, 5-person, w/cover, steps, chemicals, 3 yrs. old, \$1,995. 864-8183
- ★ Set 2002 OEM Pony wheels w/Goodyear Eagles, 13K miles on tires, \$500. 528-7047 after 6 p.m.
- ★ Large overstuffed off-white sofa & loveseat, \$500; IMAC computer & Epson printer, \$200. 536-5132
- ★ Child's battery-powered jeep, \$75. 828-0756
- ★ Computer desk/work station, 2-piece, 51x56x27, \$40. 883-6444
- ★ Chrome rims & tires, 17-inch, reasonable. 883-7312
- ★ Computer desk w/hutch, planked Cherry, Sauder Woodberry Collection #6834-100 & 6835-100, \$275. 722-0810
- ★ Formal Cherry entertainment center w/door, brass handles, holds 27" TV, \$300. 519-9326
- ★ Memory card, 256MBxD, \$85. 656-0546
- ★ Teak stereo cabinet, \$300; three six-panel stain grade white pine interior doors, \$50 each. 971-9211
- ★ Electric scooter, blue w/battery charger, \$125. 828-0756
- ★ Approximately 800 B/F rough cut cherry lumber, \$1 per B/F. 683-3745
- ★ Bear Whitetail compound bow, 60 lb. pull, 30" draw, w/sights, quiver, hard case, \$190. 851-8085
- ★ 1989 Honda CR250R dirt bike, \$1,000;
- ★ 1996 Honda XR100 dirt bike, \$1,200. 256-961-9528
- ★ Lifestyle treadmill, 0.7 mph, \$100. 931-427-2027
- ★ All-in-One Dell printer, new, copy print scan, ink included, \$73. 489-0136
- ★ Whirlpool washer, under warranty until 8/7/05, \$200. 774-5457
- ★ Toddler fire truck bed w/Elmo sheet set & comforter, make offer. 509-6810
- ★ Similac, 1 case, 24 cans, 4-boxes baby food, two 4-packs juice, \$85. 828-8797

- ★ 1977 Avion travel trailer, 27', for hunting, camping, or lake lot, \$4,500. 931-427-2059
- ★ Sears chipper/shredder, 8HP, takes 3" limbs, \$250; various items for Goldwing Trike, Inc. cover. 837-6776
- ★ Barracuda mountain bike, JU0YXC Rock Shox Shimando XT & LX Mavic rims, V-brakes, \$400. 217-1974
- ★ Home gym, \$125; exercise bike, \$50. 830-4673
- ★ Beanie Babies, \$8 ea.; Happy, Glory, Peace, Spooky, Fleece, Fortune, Wrinkles, Inch, Jabbers, \$2 ea. 533-5942
- ★ Couch, \$50; recliner, \$15; console TV, \$35; small b/w TV, \$5. 859-4156
- ★ Kelvinator washer & dryer, heavy-duty, extra-large capacity, approx. 7 yrs. old, \$350 pair. 880-9025
- ★ Flex CTS weight bench, uses 10-200 lb. equivalent weight-bands w/stepper, \$75. 464-9910
- ★ Eight Cambridge Rose Point ice tea glasses #3121, \$50 each. 256-723-4829
- ★ 1986 "Honey" 22' motor home, sleeps 6, 66K miles, bath, kitchen, refrigerator, microwave, \$5,500. 881-8674
- ★ GE stove, \$160; dishwasher, \$135; Cannodale 58cm Dura-Ace and Ultegra, \$750. 721-7799
- ★ MARX Marlines 1930s tinplate electric train set, complete, working, w/original box, transformer. \$200. 306-0700 Decatur

Vehicles

- ★ 2000 Mazda 626, 4-door, 41K miles, silver w/gray interior, ps/pb/pb/pl, CD cassette, a/c, \$9,950. 256-230-0806
- ★ 1992 Ford Explorer, 4x4, auto, V6, sunroof, pw/pl/ps, Lumbar seats, new transmission, \$2,150. 256-498-5911
- ★ 1998 Honda Harmony mower, 21", bag or mulch, w/spare parts, \$75. 325-7542
- ★ 1997 Ford Explorer XLT, maroon, leather, one-owner, 84K miles, \$6,800. 721-7799
- ★ 1994 Mustang, 6-cyl., auto, ps/pw/pl, dual air bags, \$3,750 firm. 256-753-2278
- ★ 1978 Chevrolet, 1/2-ton pickup, 350/2bbl, trailer special (suspension/transmission), \$600. 778-9149/Dave
- ★ 1992 Volvo 960, 134K miles, never wrecked, one-owner, \$3,499. 325-5646
- ★ 1988 Nissan Pathfinder, maroon, 4WD, pl/

- pw, a/c, CD, bike rack, 218K miles, \$3,000. 256-881-0656
- ★ 1986 S-10 Chevy pickup. 931-937-6518
- ★ 1997 Chevy S10, V6, Xcab, white, auto, new tires, battery, etc., 88K miles, \$6,800. 881-2166
- ★ 1997 Nissan Maxima SE, auto, leather, Bose, sunroof, 89K miles, \$8,500. 864-8173
- ★ 1996 Buick Century, red, 36K miles, needs body work, \$3,000. 880-0150
- ★ 1991 Ford Explorer XLT, 4-door, leather, sunroof, 64K miles, new a/c, brakes, more, \$5,000. 880-6498
- ★ 1991 Chevy pickup, red, 4.3L, 5-speed, a/c, tilt, am/fm tape w/CD, 120K miles, \$3,500. 489-7337
- ★ 2000 Pontiac TransAm/RAM-air, 6-speed-silver W56 pkg., fully loaded, T-tops. 694-5482
- ★ 2000 Ford Windstar, maroon, 84K miles, \$9,400. 828-7377
- ★ 1994 Chevy Lumina, runs well, \$2,300. 256-739-9467 until 8 p.m.
- ★ 2000 Hyundai Elantra, 4-door, 50K miles, under warranty, \$5,200. 256-961-7852
- ★ 1996 Honda Accord EX sedan, 4-door, white, sunroof, CD, leather, power, 95K miles, \$6,500. 489-4081
- ★ 1999 Cadillac DeVille, shale, 71K miles, am/fm cassette, fwd/traction, abs, cruise, anti-theft, leather, \$12,500. 534-9631
- ★ 1986 C20 pickup, LWB, auto, ps/pb, V8/305, \$1500. 379-3606
- ★ 2003 Mercedes Benz C240, 2-months old, 5K miles, \$30,500. 837-1774
- ★ 1994 Formula Firebird, LT1/V8, 6-speed, leather, T-tops, modified, \$6,000. 256-722-3114
- ★ 2002 Silverado Z71, ext. cab, 4WD, leather, CD, tow pkg., 53K miles, \$19,500. 256-214-0110

Wanted

- ★ RAM for Gateway computer, PC133, SDRAM, 168 pin, DIMM. 883-2757
- ★ Upright refrigerator/freezer in good condition. 895-9103
- ★ Trumpet for college student. 883-2757
- ★ Legal size 3-ring binder; golden replicas of U.S. stamps and binder. 881-6595
- ★ Used treadmill or elliptical machine in good condition. 882-6428/leave message

MARSHALL STAR

Vol. 44/No. 15

Marshall Space Flight Center, Alabama 35812
(256) 544-0030
<http://www1.msfc.nasa.gov>

The Marshall Star is published every Thursday by the Internal Relations and Communications Department at the George C. Marshall Space Flight Center, National Aeronautics and Space Administration. Contributions should be submitted no later than Monday noon to the Marshall Internal Relations and Communications Department (CD40), Bldg. 4200, room 101. Submissions should be written legibly and include the originator's name. Send electronic mail submissions to: intercom@msfc.nasa.gov The Marshall Star does not publish commercial advertising of any kind.

Manager of Internal Relations
and Communications — Steven Durham
Editor — Jonathan Baggs

U.S. Government Printing Office 2004-633-065-60085

Permit No. G-27
NASA
Postage & Fees PAID
PRE-SORT STANDARD